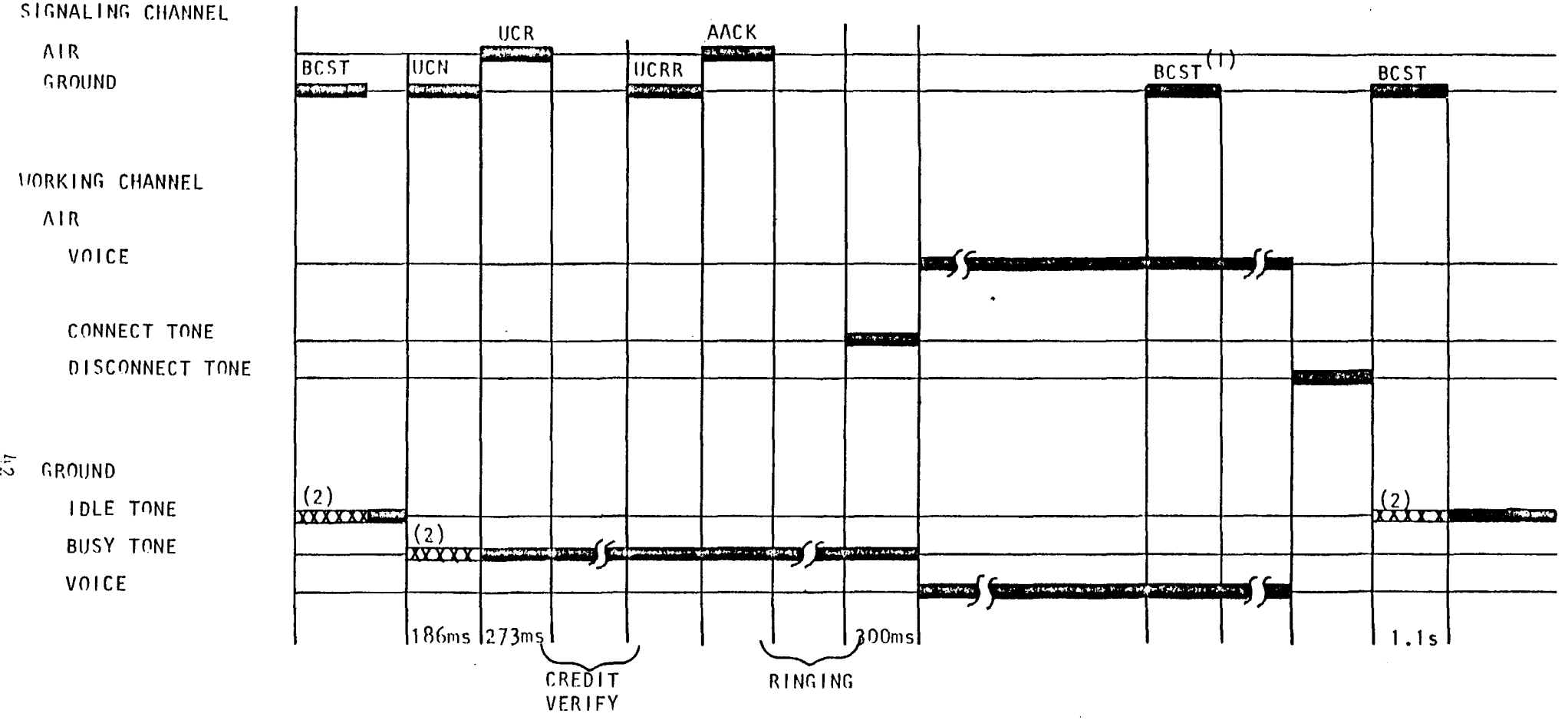


(1) SHOULD AN UPCALL FAIL TO BE ANSWERED IN THE TIME ALLOTTED BY THE GROUND STATION THEN THE GROUND STATION SHOULD IMMEDIATELY BROADCAST AN IDLE STATUS.

(2) INTERRUPTION, CLASS II STATION

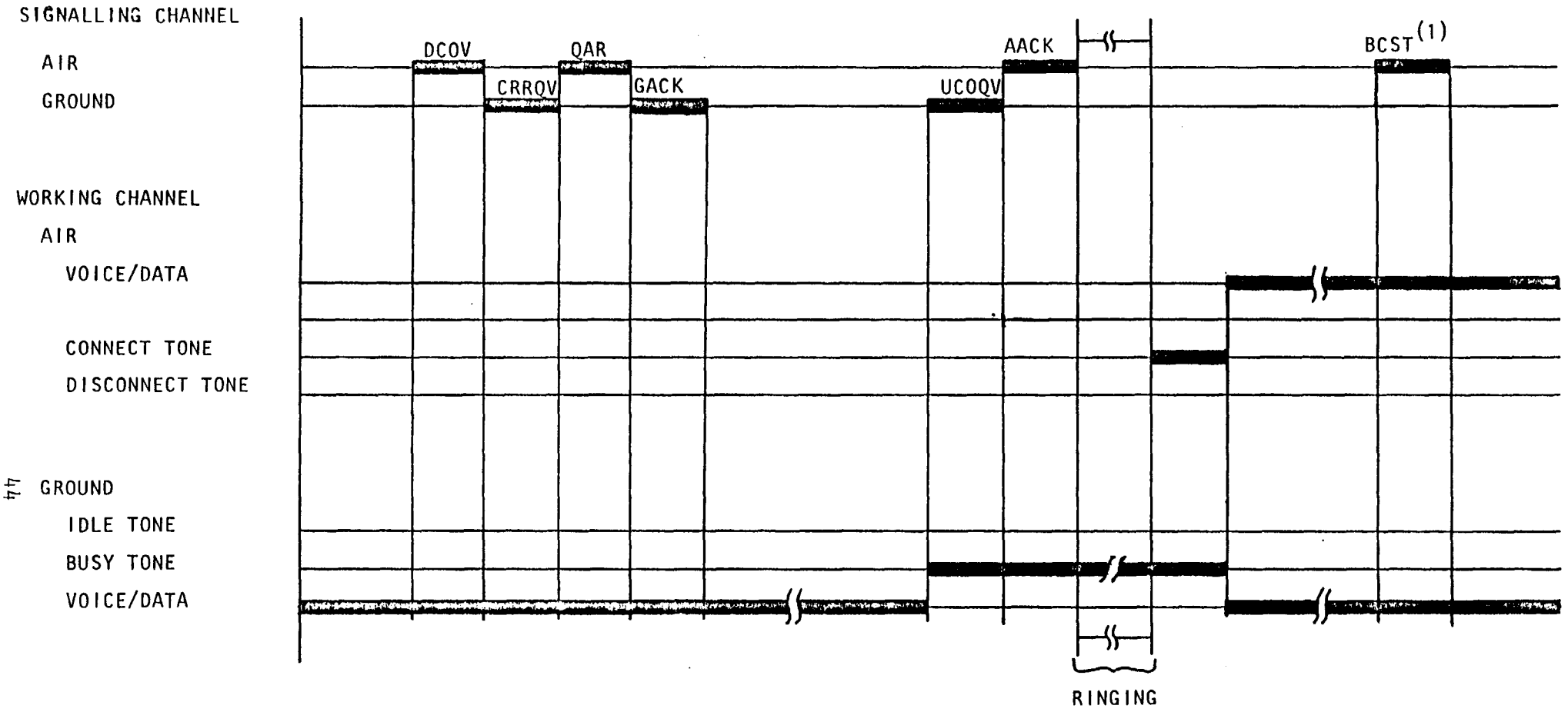
NOTES:
a) DO NOT SCALE TIME BASE
b) DATA BURST SIGNALLING AND TONE TIME IS MESSAGE TIME ONLY.
c) TURN-AROUND TIME IS NOT SHOWN

FIGURE 3B VOICE UPCALL

APPENDIX B

FIGURE 4B DATA NETWORK UPCALL

(DELETED)



(1) SHOULD AN UPCALL FAIL TO BE ANSWERED IN THE TIME ALLOTTED BY THE GROUND STATION THEN THE GROUND STATION SHOULD IMMEDIATELY BROADCAST AN IDLE STATUS.

NOTES: a) DO NOT SCALE TIME BASE
b) DATA BURST TIME AND TONE TIME IS MESSAGE TIME ONLY.
c) TURN-AROUND TIME NOT SHOWN

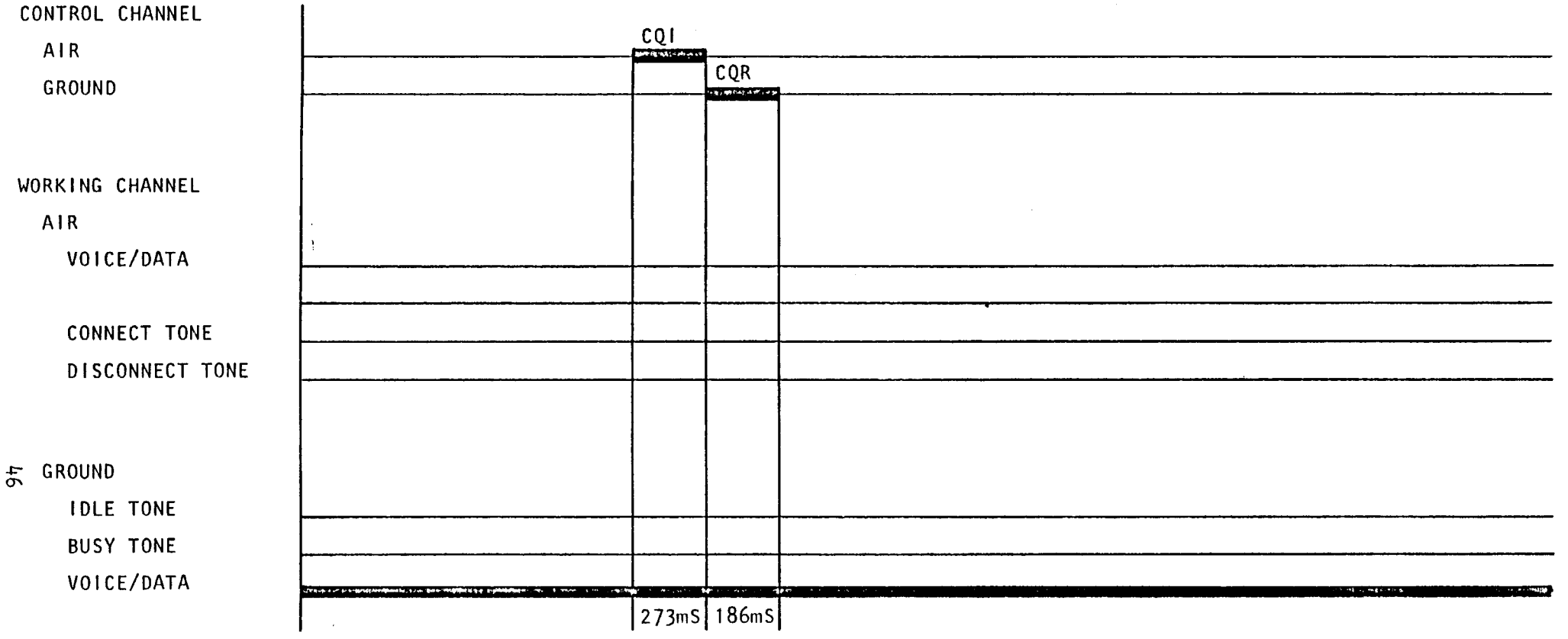
FIGURE 5B AIRCRAFT CALL - QUEUE (VOICE)

REV.H

APPENDIX B

FIGURE 6B FLIGHT FOLLOWING SERVICES (EXCEPT NETWORKED DATA CALLS)

(DELETED)



NOTES: a) DO NOT SCALE TIME BASE

b) DATA BURST AND TONE TIME IS MESSAGE TIME ONLY.

c) TURN-AROUND TIME NOT SHOWN

FIGURE 7B AIRCRAFT CLEAR QUEUE

APPENDIX C

DTMF TONE PAIRS

DTMF SIGNAL	LOW FREQUENCY	HIGH FREQUENCY
1	697 Hz	1209 Hz
2	697 Hz	1336 Hz
3	697 Hz	1477 Hz
4	770 Hz	1209 Hz
5	770 Hz	1336 Hz
6	770 Hz	1477 Hz
7	852 Hz	1209 Hz
8	852 Hz	1336 Hz
9	852 Hz	1477 Hz
0	941 Hz	1336 Hz
*	941 Hz	1209 Hz
#	941 Hz	1477 Hz
A	697 Hz	1633 Hz
B	770 Hz	1633 Hz
C	852 Hz	1633 Hz
D	941 Hz	1633 Hz

APPENDIX D

AUDIBLE SIGNALS

DIAL TONE	350 Hz, 440 Hz tone pair, equal amplitude. Continuous.
BUSY TONE	480 Hz, 620 Hz tone pair, equal amplitude. 0.5 second on, 0.5 second off.
REORDER TONE	480 Hz, 620 Hz tone pair, equal amplitude. 0.2 second on, 0.3 second off.
AUDIBLE RING TONE	440 Hz, 480 Hz tone pair, equal amplitude. 2 seconds on, 4 seconds off.

APPENDIX E

(DELETED)

APPENDIX F

LOOP TEST TELEPHONE NUMBER

In the AGRAS system, when the Loop Test Telephone Number is dialled from the ARU, test routines as described herein occur. The ground station, after receiving the call and verifying billing information detects the Loop Test Telephone Number and after connecting the working channel returns a DTMF "A" tone pair for five seconds and then waits for five seconds before disconnecting.

If the caller wants to receive a test upcall he presses the "8" key (T for Test) within the five seconds after the "A" tone pair ends and hangs up the phone. The ground station waits ten seconds after detecting the disconnect tone pair sequence and then places a call to the aircraft or AMIN that generated the request for test. When the upcall is answered the ground station proceeds with the DTMF tone pair sequence, "A", "B", "C", and "D". This sequence should be completed in ten seconds and at that time the ground station disconnects the call and reverts to the idle status or serves the next call in queue as the case may be.

The Loop Test Telephone Number is a five digit number of the form:

199XX

The particular Loop Test Telephone Number for the test described here is 19900. All other numbers where XX is in the range of 01 to 99 are reserved for future assignment.

APPENDIX G

DELETED

APPENDIX H

AUTOMATIC NUMBER IDENTIFICATION; GROUND STATION ADDITION

Automatic Number Identification (ANI), when added to the AGRAS ground station terminal, must function to intercept all calls that could produce a billing charge to an unauthorized or known bad number. This includes both air and ground originated calls and air originated calls being placed into queue.

In the case of ground originated calls, the terminal must return a trouble (re-order) tone or recorded message after recognizing that the dialled AMIN and resultant AMIN-AVER combination determined from the UCR message is invalid for any reason. In the case of air originated calls, the terminal may respond with a CRREV message with the "service denied bit" set to "1" after recognizing that the AMIN-AVER combination is invalid in the control message requesting service. The ARU shall in turn provide a trouble tone to the caller. If the terminal has connected the call prior to completed ANI, then the terminal shall provide a trouble tone to the caller.

In the case of a request for queue from an airborne caller, the terminal, when it recognizes an invalid AMIN, may cause a CRRQV message to be sent with the "service denied bit" set to "1". The ARU shall in turn provide the caller with a trouble tone. If the terminal has queued the call prior to completed ANI, then the terminal shall cause a UCOQV message to send with the "service denied bit" set to "1".

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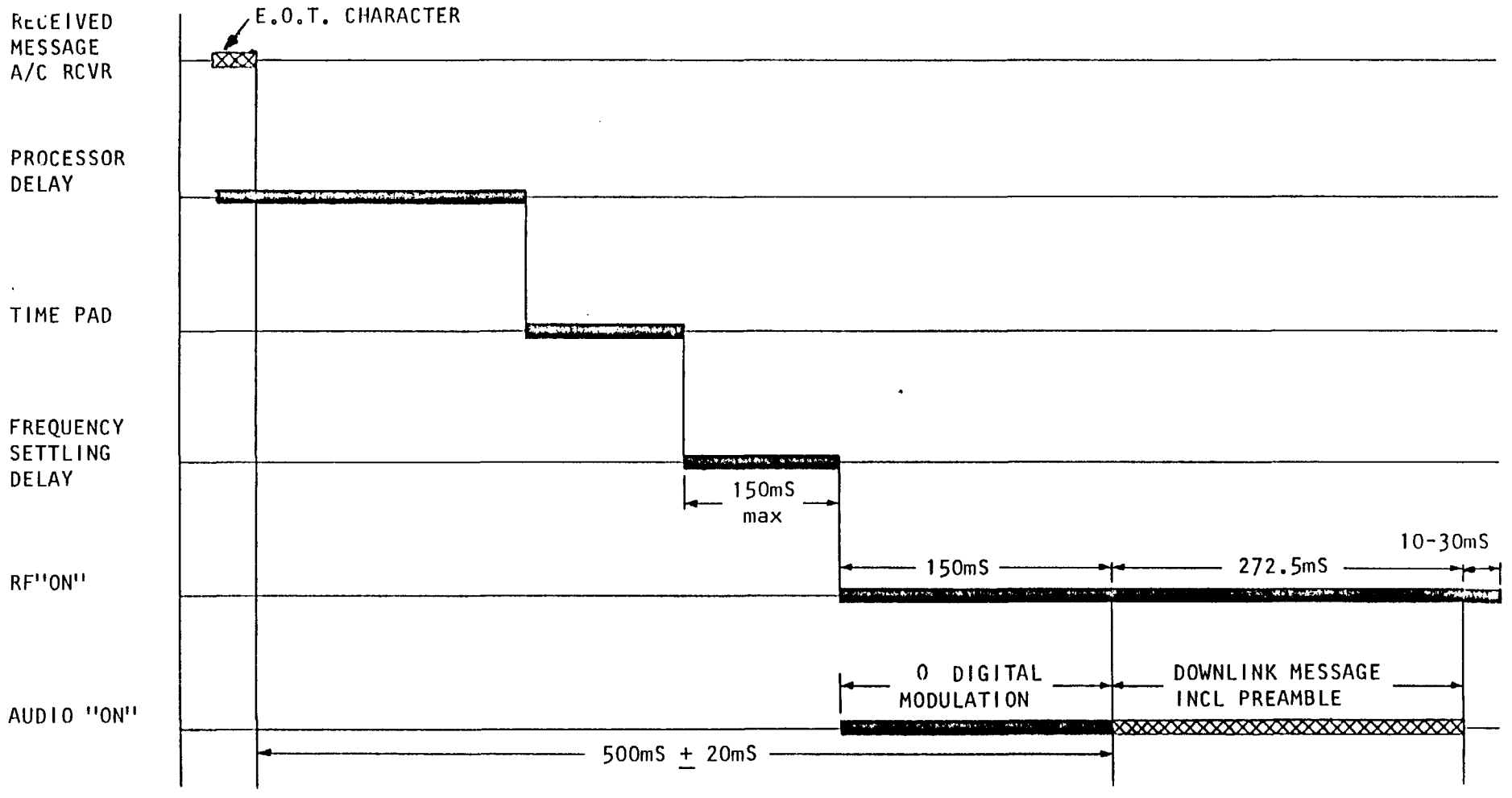

FIGURE I1 AIR TO GROUND CONTROL CHANNEL TRANSMIT TIMING DIAGRAM/FLOW CHART

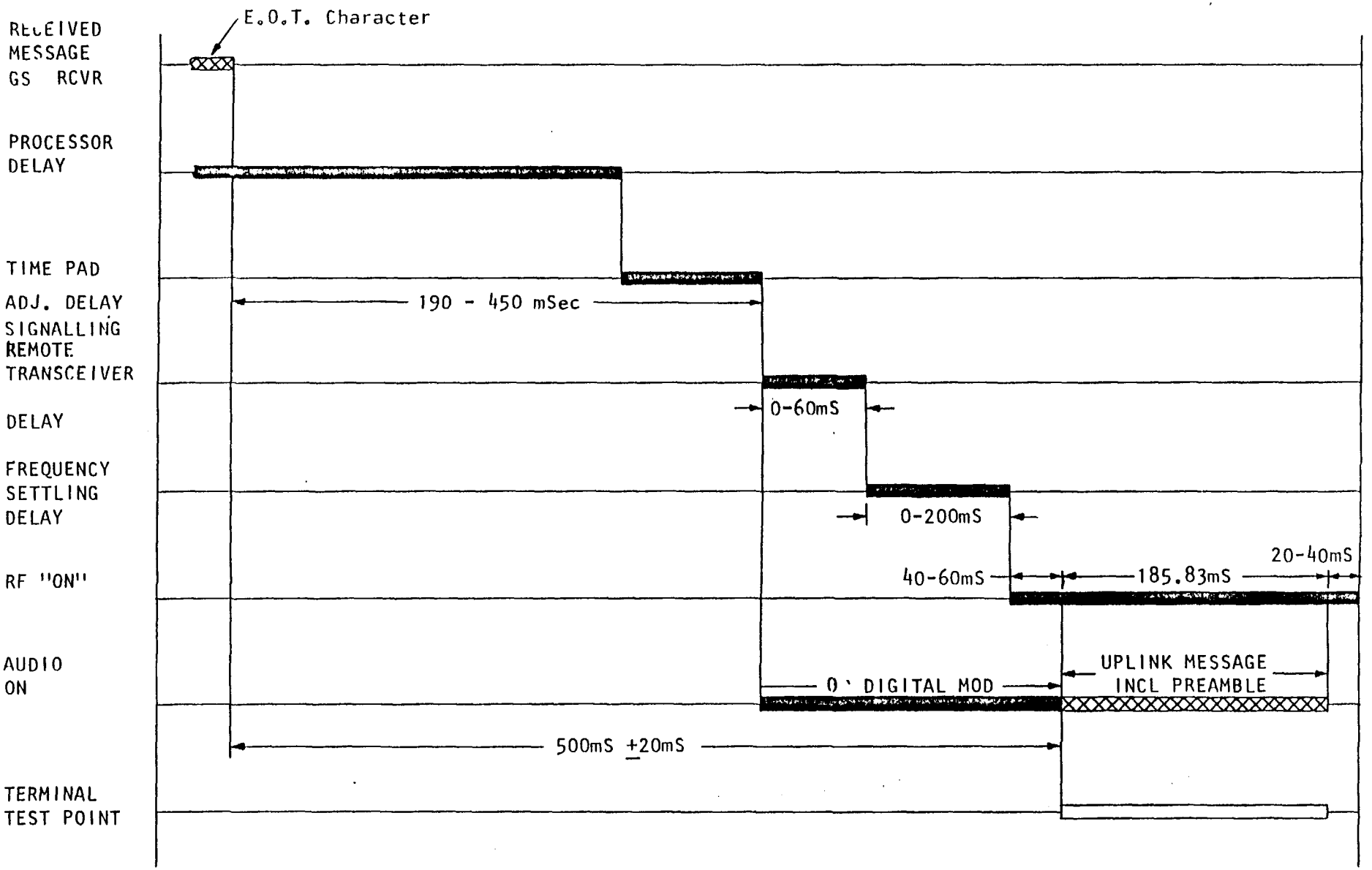

FIGURE I2 GROUND TO AIR CONTROL CHANNEL TRANSMIT TIMING DIAGRAM/FLOW CHART

TECHNICAL REFERENCE, AIR-GROUND RADIOTELEPHONE

AUTOMATED SERVICE (AGRAS) SYSTEM OPERATION

AND EQUIPMENT SPECIFICATION

CHANGE LIST - REV.H - 4/4/85

PAGE	SECTION	REMARKS
vii	Para. 5.9	Change description
	Para. 5.14	Change page
	Para. 5.15	Change page
	App E	Delete
28	Table 3	Add GACK & UCRR
29	Para. 4.2.2	Add text
30	Table 4	Add AACK
33	Para. 5.4	Correct text
	Para. 5.5	Correct text
34	Para. 5.9	New text
35	Para. 5.9	New text
36	Table 5	Add UCRR, QAR
37	Para. 5.14	Move text
	Para. 5.15	Move text
38	App A Table 1A	Add GACK, UCRR; correct CRRV & CRRQV
39	App A Table 2A	Add AACK
41	App B Fig. 2B	Change fig., delete BCST
42	App B Fig. 3B	Change fig., add UCRR, AACK, etc.
43	App B Fig. 4B	Delete
44	App B Fig. 5B	Change fig., add GACK, AACK, etc.
45	App B Fig. 6B	Delete
52	App H	Add and change text
53	App I Fig. 11	Revise RF "ON"
54	App I Fig. 12	Revise RF "ON"